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### Towards a framework for psychological resilience in children and adolescents with Borderline Intellectual Functioning

**Abstract:** Psychological well-being is one of the greatest concerns in children and adolescents with Borderline Intellectual Functioning (BIF). Those youths are frequently exposed to stress and social inequality, and they are particularly prone to developing mental health issues which persist through adolescence and into adult life. The purpose of this article is to introduce a framework for promoting psychological resilience in children and adolescents with BIF. Three interrelated and complementary factors require professional attention and efforts to improve resilience in children with borderline intelligence: a) protecting a child's self-worth, b) generating sources of social support, c) training of adaptive coping skills. The significance of early diagnosis and continuous monitoring of a child's development is also discussed. Children with BIF should be provided with internal (self-worth, coping skills) and external (social support) resources to enhance their resilience and ability to confront adversities, and to reduce the risk of mental health issues.

**Keywords:** Borderline Intellectual Functioning, resilience, self-worth, social support, coping skills

#### Grey area children

Youths with Borderline Intellectual Functioning (BIF) are considered the most invisible and neglected population in academic, health, and socioeconomic domains (Salvador-Carulla et al., 2013). This observation is quite surprising in view of the fact that according to the normal distribution individuals with this chronic intellectual condition constitute 13.6% of the general population. It is expected that approximately 3 to 4 children with BIF are educated in an average classroom (Cooter & Cooter, 2004). Furthermore, numerous researchers believe that the number of students with BIF is significantly higher, accounting for up to 18% of the general population (Ferrari, 2009; Hassiotis et al., 2008). According to Gottlieb, Gottlieb, and Wishner (1994), nearly half of the students diagnosed with learning disabilities in New York City were recognized as having borderline intelligence.

Persons with BIF experience a variety of educational, personal, and social problems that begin in childhood. Learning difficulties emerge first and become apparent at the beginning of their formal education. Due to low cognitive abilities, students with BIF struggle to acquire basic academic skills, such as writing, reading, and math

(Karende, Kanchan, & Kulkarni, 2008). Their inability to accomplish academic standards results in higher risk of poor academic attainment, grade retention, and higher school dropout rates (Kaznowski, 2004; MacMillan, Gresham, & Bocian, 1998). Despite the difficulties in meeting minimum standards of general education, most students with borderline intelligence are not eligible for services available to children in special education. These students do not qualify for special education assistance since BIF is neither a form of disorder nor an intellectual disability. With no formal and appropriate help, students with borderline intelligence frequently fall into the grey area of education – an overlooked zone between general and special education systems (MacMillan, Gresham, Bocian, & Lambros, 1998).

Inadequate educational and societal assistance results in limited vocational opportunities and problems with accessing the labour market. Underemployment and unemployment are among the greatest problems faced by adolescents and adults with borderline intelligence, severely limiting their financial independence. Insufficient economic resources consequently prohibit them from managing a household independently (Dunham & Schrader, 2000; Salvador-Carulla et al., 2013) and doom them to welfare

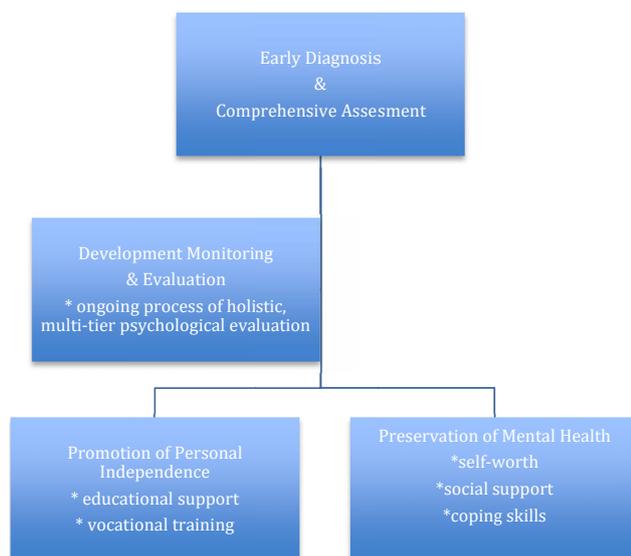
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services. Thus, income predicts the quality of life among adults with BIF (Rimmerman, Yurkevich, Birger, Azaiza, & Elyashar, 2007).

In addition to educational and vocational failures, individuals with BIF are also exposed to numerous psychological problems and social disadvantages that produce undesirable and lifelong consequences (Emerson, 2007). Persons with borderline intelligence suffer from social rejection, limited sources of social support, and fewer chances of a long-lasting romantic relationship (Hassiotis et al., 2008). Many individuals who are also diagnosed with anxiety, depression, conduct disorders, and other mental health problems receive incomplete or inadequate clinical help. Many health care specialists are reluctant to work with this population due to concerns over the effectiveness of an intervention provided to persons with a limited ability to understand own mental states. Thus, individuals with borderline intelligence are often confined to pharmacotherapy which is a common form of treatment for this population (Hassiotis et al., 2008; Masi, Marcheschi, & Pfanner, 1998; Weiss & Lunsky, 2010). The invisibility in the education system combined with inadequate social and health assistance frequently increases the risk of pervasive mental disorders and low psychological well-being of youths with borderline intelligence.

The purpose of this article is to introduce a model promoting psychological resilience in children and adolescents with BIF. The model is based on the assumption that educational, vocational, psychological, and social support is required to: a) promote personal independence, b) ensure healthy personal growth, and c) facilitate social integration of such individuals. Therefore, the framework pictured in Figure 1 illustrates the process in which meticulous early diagnosis and comprehensive assessment of a child's intellectual resources and psychosocial needs, immediately followed by a regular and continuous holistic process of multi-tier development monitoring, determines the choice

**Figure 1. The framework for promoting psychological resilience in children and adolescents with Borderline Intellectual Functioning**



of strategies for promoting resilience in the aforementioned areas. This framework indicates that special assistance and care should be invested simultaneously in two domains: 1) vocational and educational training promoting personal independence, and 2) preservation of mental health in children and adolescents with BIF. Children and parents alike need guidance and assistance in planning the child's educational and vocational future (Thomson & Rudolph, 2000), but due to space constraints this manuscript focuses primarily on the second aspect of this comprehensive model, namely the preservation of mental health by: a) protecting an individual's self-worth, b) expanding the sources of social support, and c) developing adaptive coping skills. The components of the described model will be elucidated in the next sections of the article.

### The importance of resilience

Resilience, due to its great importance for psychological well-being, became a focus of attention of many researchers and practitioners. This psychological construct describes a positive adaptation to and recovery from negative experiences and significant adversities, including traumas (Luthar, 2000; Tusaie & Dyer, 2004). Despite the simple definition, resilience is quite a broad term. Thus, scholars vary in their approach to this concept. Luthar and Cicchetti (2000) understood it as a "dynamic process" of successfully overcoming traumas and adapting to an adverse situation (p. 543). Also Yates, Egeland, and Sroufe (2003) viewed it as a developmental process in which children learn how to use internal and external resources for effective adaptation. Another approach defines resilience as an individual's ability to cope effectively with stress and obstacles, to endure and recover from crises, and to develop gradually despite experienced adversities (Heiman, 2000). New models advocate resilience as a dynamic interaction between risk and protective factors in the context of adversities (Brown et al., 2010; Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003; Toland & Carrigan, 2011). The specific constellation of negative and protective components in the framework of particular crisis situation determines an individual's resilience and the probability of serious psychosocial or mental health problems in the future (Greenberg, 2006). Poor school attainments, peer rejection, lack of parental control, limited communication between family members, poverty, parents' mental health disorders, and domestic violence are the most threatening for a child's psychological well-being and positive adaptation (Fraser, Richman, & Galinsky, 1999; Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998; Rutter, 2006). Protective factors that contribute to resilience are categorised into three levels: individual, social/family, and environmental. The individual level: positive self-esteem and problem-solving coping strategies (Dumont & Provost, 1999), self-efficacy (Hamill, 2003), internal locus of control (Leontopoulou, 2006), academic competence, autonomy, and sense of purpose (Waxman, Gray, & Padron, 2003). The social/family level: family cohesion and warmth (Phipps & Mulhern, 1995), family support, close family relationships, open communication, a good financial situation

(Greeff & Van Der Merwe, 2004), social skills (Luthar, 1991), social support (Armstrong, Birnie-Lefcovitch, & Ungar, 2005), and a teacher-student relationship (Johnson, 2008). The environmental level: safe neighbourhood, access to community resources, and affiliation to organizations (Bekhet, Johnson, & Zauszniewski, 2012).

Resilience is extremely important in education (Benard, 1991; Johnson, 2008). The quality of a school setting, academic achievements, relationships with teachers, and peer acceptance are crucial for a student's positive adaptation and fostering resilience. This is especially true for children with BIF. Students with below average IQ levels who experience chronic stress and adversities are more prone to developing serious behavioral, social, and mental problems (Luthar, 2006).

### What is Borderline Intellectual Functioning?

Vague descriptions in international classifications, etiological heterogeneity, comorbidity with other disorders, and the diversity of cognitive profiles contribute to various misconceptions about BIF and may render a proper diagnosis difficult (Fernell & Ek, 2010; Salvador-Carulla et al., 2013). Incomplete or irrelevant diagnoses of BIF may limit the availability of effective and immediate psychological support for youths with borderline intelligence.

Borderline Intellectual Functioning is not a disability or a disease. Nonetheless, it causes developmental delays that affect personal, social, and vocational functioning. Although BIF has severe lifelong consequences, international classifications of diseases, such as the DSM-5 or ICD-10-CM, are limited sources of information on this condition and offer no real insight into the functioning of individuals with borderline intelligence. In some coding systems, including the International Classification of Functioning, Disability and Health (ICF), it is disregarded entirely. The absence of a comprehensive definition of BIF in international classification systems can be attributed to two factors: a) changes in the classification of BIF (normality vs. intellectual disability) and b) heterogeneous etiology of BIF (discussed in the following paragraphs). As a result, many coding systems no longer provide information about the diagnosis, prevalence, etiology of the condition or the limitations of individuals with BIF whose intellectual functioning is considered to be within the normal range.

Borderline Intellectual Functioning refers to intelligence quotient (IQ) between -1.01 and -2.00 standard deviations, which ranges between the average IQ and mild intellectual disability but remains within the bounds of normality (since the introduction of the 9th revision of ICD). The American Psychiatric Association (2013) in its Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not consider BIF (V62.89) a form of intellectual impairment, however, it emphasizes that this condition may require clinical attention and stresses the importance of differential diagnosis with mild intellectual disability, especially when an individual suffers from comorbid mental health disorders. In the International Classification of Diseases, 10<sup>th</sup> Revision, Clinical Modification (ICD-10-CM) of the World Health

Organization (2015), BIF is described merely as a condition involving deficits in cognitive functioning and awareness (R41.83).

Borderline Intellectual Functioning is also described as a polyetiological neurodevelopmental entity (Salvador-Carulla et al., 2013). Both biological and sociocultural factors are responsible for developmental delay (Aicardi, 1998; Bradley & Corwyn, 2002). Genetic liability, prenatal exposure to toxins and infections, perinatal encephalopathy, environmental deprivation, low socioeconomic status, maternal stress, and parental negligence may result in borderline intelligence (Kostrzewski, 1981; Saddock & Saddock, 2008). However, the majority of children with borderline intelligence have no history of significant perinatal alterations, severe or chronic illness, delays in motor or language development (Karande et al., 2008). Borderline intelligence may co-occur with other diseases or disorders, such as ADHD, conduct disorders or Foetal Alcohol Syndrome (Karande et al., 2008; Kerns, Don, Mateer, & Streissguth, 1997).

The polyetiological nature of BIF is reflected in heterogeneous clinical and cognitive profiles of individuals with borderline intelligence (Salvador-Carulla et al., 2013). Students diagnosed with BIF are characterised by at least three significantly different cognitive profiles: a) an even and "flat" cognitive profile where all verbal and non-verbal skills are below average (-1.01 to -2.00 standard deviations below the norm); b) an uneven cognitive profile where verbal skills are significantly decreased and below average, but performance skills are relatively well developed and at the threshold of the normal spectrum; c) an uneven, "spiky" cognitive profile for both verbal and non-verbal skills, which is similar to the ACID profile and where the greatest impairments are observed in the Arithmetic, Coding, Information, and Digit Span WISC-R subtests (Jankowska, 2011). The heterogeneity of cognitive profiles proves that cognitive impairments of those with BIF vary in degree and from person to person. However, the majority of individuals with borderline intelligence share many non-cognitive similarities regarding social disadvantages, peer rejection, personal difficulties, and the risk of psychiatric disorders. For this reason, professional assistance should focus on emotional and social aspects to prevent further deterioration in mental health and social marginalization of this vulnerable population.

The cognitive progress and psychosocial functioning of children and adolescents with borderline intelligence should be monitored and meticulously assessed at every stage of their development in order to protect them from secondary social and mental health problems and to foster their development to the greatest extent possible.

### Early diagnosis, comprehensive assessments, and monitoring of developmental progress

Early diagnosis and interventions are crucial for the developmental trajectories of youths with BIF as they may increase a child's chances of reaching developmental milestones at each age level (Ninivaggi,

2001; Salvador-Carulla et al., 2013). Unfortunately, this condition is rarely recognized before the beginning of formal education (Bocsa, 2003). Since there are no obvious changes in a child's physical appearance, and children with BIF are able to cope with many everyday life situations, borderline intelligence is frequently diagnosed only when the first serious academic problems occur. The affected youths have a limited ability to learn through verbal and abstract modalities required in general education and they have insufficient school readiness, which determines their inability to achieve fundamental educational standards (Cooter & Cooter, 2004). However, as mentioned at the beginning of this article, the problems of children with borderline intelligence are far more complex and extend beyond learning difficulties. Therefore, this chronic, incurable condition requires permanent support from professionals in various fields throughout childhood, adolescence, and adulthood.

Early recognition of borderline intelligence should be followed by a comprehensive assessment of a child's abilities and impairments in order to formulate further therapeutic recommendations. A psychometric evaluation is a crucial element of the diagnostic process, but a mere result of an IQ test is insufficient and further information regarding a child's functioning is required. A comprehensive diagnosis of the severity and nature of deficiencies in youths with BIF requires detailed information about an individual's psychosocial functioning and adaptive skills (Siegert & Weiss, 2007). An evaluation of the latter is crucial for a differential diagnosis of intellectual disability. According to the DSM-5 guidelines, special caution should be exercised when diagnosing persons whose global IQ is between 71 and 75 because individuals with mild intellectual disability may also score within this IQ range (APA, 2013).

Holistic psychological evaluations should: a) produce a comprehensive framework for predicting further development, b) facilitate the choice of appropriate interventions, and c) support monitoring and assessment of a child's progress. Assessments should be robust and include specific information about an individual's strengths and limitations not only in the context of cognitive functioning and academic achievement, but also their personality and emotional development, mental health risks, social adaptability, and attainment of personal independence – areas of functioning that determine psychological well-being. Information regarding a child's functioning should be gathered from interviews with parents and other professionals who interact with a child on a daily basis (teachers, school psychologists), and it should be based on a clinical observation. Evaluations should elicit information that facilitates the identification of present and future limitations with the main focus on: a) functional academic skills, b) further education paths and vocational opportunities, c) emotional regulation and coping skills, d) development of self-worth and personality development, e) development of social competences and communication skills, f) sources of social support, g) development of self-care skills and independence in everyday life situations,

h) possible risk factors and first symptoms of mental health problems (e.g. anxiety, depression), i) signs of comorbidity of psychological disorders, j) family situation (e.g. addictions, mental health problems, parenting styles and attitudes towards a child, socioeconomic status).

A comprehensive psychological profile requires information about a child's family. The family environment and parental attitudes play a major role in a child's ability to accomplish developmental milestones, which is why a child's family system should be carefully investigated. Recent studies have demonstrated that educational and social difficulties experienced by students with BIF remain largely unrecognised by their parents (Karendé et al., 2008). For this reason, they may have unrealistic expectations regarding a child's abilities (Kaznowski, 2004), they may disregard a child's academic impairments and disengage from supporting a child's development and education by not helping with homework and school projects, and not seeking professional help (Bocsa, 2003). Mothers of children with borderline intelligence may exhibit less positive engagement towards them while complaining about child-rearing difficulties and perceiving their children's behaviour as challenging, even when no differences are observed between these children and their typically developing peers (Bocsa, 2003; Fenning, Baker, Baker, & Crnic, 2007).

Children with BIF are particularly sensitive to the quality of parental care. As illustrated by the research results of Fenning, Baker, Baker, and Crnic (2014), controlling and emotionally withdrawn mothers directly contributed to behavioural difficulties of children with BIF. These results are partially consistent with the findings of Jankowska, Takagi, Bogdanowicz, and Jonak (2014). In their research dominant, demanding and strict maternal parenting style was associated with poor academic motivation and externalized locus of control over school success among students with BIF. Such results were not observed in the control group.

A comprehensive psychological assessment of children with BIF requires constant monitoring and evaluation of the subjects' developmental progress. In view of the polyetiological nature of borderline intelligence, a child's development should also be closely monitored to facilitate the identification of symptoms of co-occurring disorders. The information gathered during regular assessments should be applied in individualised interventions to enhance resilience in children with borderline intelligence.

### **Promoting resilience and protecting mental health**

Youths with borderline intelligence are more sensitive to distress and social inequalities, and they are particularly susceptible to low levels of psychological well-being even through adult life. Surprisingly, both children and adults with borderline intelligence usually receive poor and inadequate assistance from health services (Hassiotis et al., 1999). For these reasons, the risk of mental health problems

is one of the greatest concerns for persons with borderline intelligence (Salvador-Carulla et al., 2013). Psychological difficulties that are frequently reported in this population include anxiety, depression, conduct disorders, substance abuse, and personality disorders (Dekker & Koot, 2003a, 2003b; Emerson, Einfeld, & Stancliffe, 2010; Hassiotis et al., 2008; Jacobson & Newman, 2014). High prevalence of mental disorders in this population (approximately 40% of overall psychiatric morbidity in children) is associated with insufficient social support, limited intellectual abilities, and poor competences in coping effectively with internal and external emotional difficulties caused by chronic school failure, peer rejection, socioeconomic disadvantages, and other adverse life events (Dekker & Koot, 2003; Emerson et al., 2010).

The efforts to improve resilience in children with borderline intelligence should focus on three domains: a) improving self-worth, b) expanding the sources of social support, and c) developing coping skills. Close relations with peers and social support contribute to a sense of self-worth (Shany, Weiner, & Assido, 2013), whereas social integration (Resnick et al., 1997), positive self-worth (Masten, 2001), and adaptive coping strategies (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001) significantly improve psychological resilience. All these factors are interrelated, complementary, and required for psychological well-being.

### **The value of self-worth**

Positive self-worth is an important factor that contributes to psychological well-being and prevents mental health problems (Coopersmith, 1981; Shavelson & Bolus, 1982). This concept is defined as the perception or sense of one's own intrinsic values and worth as a person (Harter 1991; Insel & Roth, 2013). Harter (1987) suggests that feelings of competence, social support, and positive regard are the main determinants of positive self-worth in children. According to Erikson's psychosocial theory of development (1959), gaining a sense of competence is a basic virtue during the school age. School success is highly valued by society, and outstanding students develop a sense of pride and academic self-worth. On the other hand, children who frequently experience academic failure, such as students with borderline intelligence, develop feelings of inferiority and incompetence (Alessi, Rappo, & Pepi, 2015; Bénony et al., 2007). Their self-worth tends to dramatically decrease with each year of educational failures (Alesi et al., 2014), which they frequently attribute to internal factors (e.g. low intelligence, lack of talents) that are difficult to change and are beyond one's control (Jacobsen, Lowery, & Du-Cette, 1986). This self-knowledge is extremely distressing, and it adds to feelings of guilt, shame, and helplessness. It is accompanied by high levels of anxiety, depressive symptoms, and conduct disorders (Alesi et al., 2014; Masi et al., 1998). Anxiety is often a response to compromised self-worth (Bernaras, Jaureguizar, Soroa, Ibabe, & Cuevas, 2011; Pereira, Barros, & Mendonça, 2012), whereas the risk of depression is

associated with feelings of incompetence (Weisz, Sweeney, Proffit, & Carr, 1993).

As mentioned at the beginning of this section, a child's self-worth is also strongly influenced by the received social support and positive regard (Harter, 1987). The quality of relationships with peers and the feedback provided by adults are as important for a healthy self-worth as one's own experiences of success and competence. Other people's reactions and comments serve as a mirror in which a child sees his/her reflection and uses that information to infer whether his/her skills and competences are effective, valued, and recognised. Unfortunately, students with borderline intelligence experience many inequalities in the school setting and that compromises their sense of self-worth. Primarily, classmates frequently reject them, thus, they have a low social status (Bocsa, 2003). Then again, teachers tend to perceive them as unmotivated and inhibited, even though children with BIF, from their own perspective, may not differ from classmates in motivation for school performance or socialization (Jankowska et al., 2014). Unfortunately, teachers' criticism and rejection may contribute to anxiety disorders in children (Drake & Ginsburg, 2012).

Both determinants of positive self-worth, feelings of competence and receiving positive regard, should be equally considered when designing interventions for youths with BIF. Positive self-competence beliefs can be promoted by encouraging these students to develop a growth mindset. A growth mindset, as opposed to fixed mindset, is based on an assumption that qualities, like cognitive abilities or social competences, can be developed (Dweck, 2006). This assumption should serve as a basis for resilience-promoting interventions dedicated to students who experience academic failures and even peer rejection (Yeager & Dweck, 2012). Interventions can hardly be effective if a child doesn't believe that his or her academic and social skills can be improved (Blackwell, Trzesniewski, & Dweck, 2007; Yeager, Trzesniewski, & Dweck, 2013). Instead of allowing students to dwell on failures, they should be guided on how to thrive on challenges and develop through effort (Yeager & Dweck, 2012). As children with BIF may have limited skills of self-observation, teachers' immediate and specific feedback about their progress plays a decisive role in the formation of feelings of industry and a growth mindset. Also peers positive response to a child's development is crucial, therefore, group interventions are recommended for children with borderline intelligence (Masi et al., 1998). The importance of social support for psychological resilience will be discussed in the following section.

### **The healing influence of social support**

The high risk of mental health disorders among youths and adults with borderline intelligence is also linked to social problems which are frequently experienced in this population (Gresham & MacMillan, 1997; Gresham, MacMillan, & Bocian, 1996; Hall et al., 2005). From the first days of their elementary schooling, children with BIF

are frequently rejected by classmates and struggle with social adaptation and acceptance (Bocsa, 2003). They quickly become aware of their low social status, they gradually withdraw from social activities and do not make further attempts to socialize (Karende et al., 2008; Masi et al., 1998). Consequently, they exist outside the mainstream of school life and, as they grow older, they disengage from the life of the local community. For youths with borderline intelligence, the greatest concern regarding their social adaptation is that they receive very little emotional support that is normally offered by peer groups, friends, and significant others (Hassiotis et al., 2008). Social connectedness is a crucial protective factor against mental health problems (Resnick et al., 1997), in particular anxiety, depression, and substance abuse (Bond et al., 2007).

Social rejection experienced by students with borderline intelligence is not solely the result of their low academic status. Major limitations to effective social adaptation also stem from deficiencies in social competence and lower awareness of own behavioural problems - students with BIF actively reject classmates for the same reasons they are being rejected (Bocsa, 2003). Furthermore, their social functioning is significantly impaired by difficulties in social information processing, emotion recognition, and perspective-taking (Bauminger, Schorr-Edelsztein, & Morash, 2005; Ninivaggi, 2001; Van Nieuwenhuijzen, Vriens, Scheepmaker, Smit, & Porton, 2011). To fully comprehend other people's intentions and react accordingly, one has to incorporate his/her point of view and be able to verify his/her emotions based on facial expression, which can be a challenging task for individuals with an IQ below average (Benson, Abbeduto, Short, Nuccio, & Maas, 1993; Lemerise, Gregory, & Fredstrom, 2005). In stressful and confusing circumstances, persons with BIF are more likely to develop a biased view of the situation by encoding more negative cues and perceiving other people's intentions as hostile (van Nieuwenhuijzen & Vriens, 2012; Pereira et al., 2012). Insufficient or incorrect processing of social information causes children with BIF to apply maladaptive strategies to cope with interpersonal conflicts (Matthys & Lochman 2005; van Nieuwenhuijzen, Orobio de Castro, van Aken, & Matthys, 2009). Due to distorted interpretations and the absence of effective strategies for solving social conflicts, children with BIF may tend to produce more aggressive and destructive responses (Van Nieuwenhuijzen, Orobio de Castro, Wijnroks, Vermeer, & Matthys, 2004; van Nieuwenhuijzen et al., 2009).

In view of the above, improved social skills and availability of social support networks are the key factors that contribute to greater resilience in youths with borderline intelligence. The development of perspective-taking abilities and reinforcement of pro-social responses lead to assertive and adaptive reactions in social conflicts (van Nieuwenhuijzen & Vriens, 2012). Researchers are divided in their opinions, but there is evidence to suggest that role-playing could be an effective tool in perspective-taking training, which could lead to improvements in the quality of interpersonal relationships (Howes & Cruz;

2009; Seevers & Jones-Blank, 2008). Furthermore, results reported by Fanning et al. (2007, 2014), which have been discussed in the previous sections, indicate that involving their families in counselling children with BIF is of crucial importance. The family should be the primary source of acceptance and emotional support. Therefore, counselling efforts to improve communication and mutual understanding should impact the quality of the parent-child relationship as well as emotional bonds within a family system. A family's ability to provide emotional support alleviates stressful experiences (Laschinger & Havens 1997; Laschinger, Finegan, & Shamian 2001) and improves stress-coping strategies (Ali & Khalil, 1991).

### The key role of coping skills

The lack of appropriate coping strategies is a potential risk factor for poor mental health (Di Benedetto et al., 2014; Rodriguez et al., 2014). The ability to handle stress requires various resources, mostly cognitive and behavioural assets (Folkman & Lazarus; 1984). Individuals with borderline intelligence, whose intellectual capacities, self-awareness, and mentalising abilities are impaired, rarely deploy efficient coping strategies to deal with difficult emotions, such as anger, rejection, or disappointment (van Nieuwenhuijzen & Vriens, 2012). Emotional problems and maladaptive coping strategies such as palliative coping are recognized as risk factors for substance abuse among persons with mild intellectual disability or borderline intelligence (Didden, Embregts, van der Toorn, & Laarhoven, 2009), and the prevalence of alcohol and drug misuse in this population is alarmingly high (Hassiotis et al., 2008; McGillicuddy, 2006). Psychoactive substances can swiftly mitigate unpleasant emotional tension and, for persons who are unable to overcome negative affect, they offer a simple and immediate solution to overwhelming distress (Hartley & MacLean, 2005).

The improvement of coping skills in youths with borderline intelligence is a crucial prerequisite for reducing the risk of substance misuse and further mental health issues. Intervention providers should promote positive coping strategies and reinforce help-seeking behaviours (Masi et al., 1998). Individual or group counselling programs should provide multiple opportunities for learning and rehearsing alternative solutions that reduce emotional tension without involving alcohol or drugs (Didden et al., 2009).

### Early prevention interventions as a response to an increased risk of mental health problems

Children with BIF have the same psychological needs as their typically developing peers, however, they experience more internal and external barriers to satisfaction, and they have fewer intellectual resources to confront these obstacles.

Impaired cognitive abilities and specific limitations in self-awareness of individuals with BIF are considered impediments to their effective counselling (Bocsa, 2003;

Hassiotis et al., 2008). For this reason, interventions oriented at analysing unconscious psychological content, such as the psychodynamic psychotherapy, are not recommended for this population (Pollak & Miller, 2009). However, Masi et al. (1998) assert that adolescents with BIF are well aware of their cognitive and educational limitations, and their low social position. Thus, it is of a great importance to study the development of self-awareness among children and adolescents with BIF and to investigate how it corresponds with the effectiveness of various resilience-promoting interventions, especially in the context of numerous concerns regarding possible difficulties in treatment adherence due to poor comprehension of the counselling process.

Behaviour management interventions were found to be effective in persons with an IQ below average (Thomson & Rudolph, 2000), and there is a growing body of research to suggest that cognitive-behavioural therapy (CBT) is appropriate one for persons with BIF (Pence, Aldea, Sulkowski, & Storch, 2011). Dialectical behaviour therapy (DBT) is also regarded as a highly effective tool for minimising distress and improving coping skills in individuals with intellectual and developmental disabilities (Brown, Brown, & Diabiasio, 2013). Both individual and group CBT are adequate for adolescents with borderline intelligence (Nestler & Goldbeck, 2011). The latter provides a safe environment for receiving group feedback, peer modelling, and rehearsing effective behaviours (Thomson & Rudolph, 2000). Various modifications that accommodate the recipients' specific needs are required to maximise the effectiveness of prevention interventions for individuals with an IQ below average. Counselling strategies should be tailored to the cognitive limitations, language abilities, and psychosocial resources of children and adolescents with BIF. The most vital adjustments include: a) simplified verbal communication with a child, b) behavioural techniques that do not require analysing thought processes (Pence et al., 2011), and c) direct and regularly repeated teaching of skills (Seevers & Jones-Blank, 2008; Shaw, 2008).

The effectiveness of an intervention for individuals with an IQ below average also largely depends on parental involvement (Anderson & Morris, 2006; Attwood 2004; Reaven & Hepburn, 2003; Sze & Wood, 2008). Parents and caregivers regularly observe children's responses to different social and emotional situations, and they are highly familiar with their strengths and limitations. For this reason, their assistance in the intervention process is invaluable. They may provide a counsellor with important information about a child's abilities and needs which cannot be accessed by a counsellor. Furthermore, parents and teachers who remain in close contact with a child and monitor his/her behaviour are in a unique position to react immediately and provide the child with feedback and guidelines for behaviour management (Pence et al., 2011). However, some parents of children with borderline intelligence may have poor parenting skills and/or exhibit undesirable attitudes towards a child (Fenning et al., 2007, 2014), which could significantly impair the effectiveness of

an intervention. Therefore, parental attitudes and feelings towards a child and the child's limitations should be identified, and if necessary, modified before counselling. A thorough understanding of the nature of a child's psychosocial and behavioural problems is a key prerequisite for acceptance (Douma, Dekker, De Ruiter, Verhulst, & Koot, 2006). Thus, a counsellor should explain the child's difficulties to the parents and provide them with guidance on supporting a child in the process of reaching his/her developmental milestones (Thomson & Rudolph, 2000). The availability of psychoeducation and counselling for parents contributes to more positive perceptions of a child (Saravanan & Rangaswamy, 2012), and it improves the quality of parental involvement in an intervention.

In view of the nature of psychosocial difficulties of youths with borderline intelligence, interventions should be organised within a school setting. This is a unique place for promoting resilience, as it may generate socioemotional support and provide numerous developmental opportunities (MacDonald & Validivieso, 2000). Close relationships with teachers and peers, appropriate expectations, and opportunities to contribute and collaborate are key environmental factors endorsing resilience in the school context (Benard, 1991). These factors should be incorporated into school-based interventions that should be provided as early as possible, before the first symptoms of maladaptation occur, and target both negative and protective factors (Durlak, 1998). The school environment should facilitate both individual and group interventions organised with the involvement of various professionals (Ahlen, Breitholtz, Barrett, & Gallegos, 2012; Salvador-Carulla et al., 2013). Close collaboration between experts in the fields of education, social work, and health should contribute to well-tailored interventions that can bring about positive changes in a child's behaviour and psychological well-being.

Programs promoting resilience among at-risk students should also focus on the school-family connection (Tolan, Gorman-Smith, & Henry, 2004). School professionals and parents should closely cooperate on strategies that require a continuous exchange of information about a child and equal involvement of both parties in designing and improving intervention programs such as Parent-Teacher Action Research (Cox, 2005). However, the maintenance of active and productive collaboration between parents, school specialists, and community professionals is a challenging task. This process requires seamless organisation and good management.

School psychologists are in a unique position to supervise such multi-level cooperation. Primarily, interacting with a child on a daily basis allows them to learn first-hand about a child's needs, abilities, and the effectiveness of the applied interventions. Then again, school psychologists have already established channels of communications with parents, teachers, and other professionals, and they are familiar with various procedures and policies. School psychologists can significantly facilitate communication and decision-making by pooling information from various sources and coordinating the efforts of all the parties involved.

The last but not the least important component of early mental health prevention in children and adolescents with BIF is fostering resilience among parents of those individuals. The amount of stress and adversities experienced by parents of children with intellectual disabilities (ID) is significantly greater in comparison with caretakers of typically developing children (Hauser-Cram, Warfield, Shonkoff, & Krauss, 2001). Beyond everyday responsibilities and caregiving demands that are potentially stressful for all parents (Crnic, Friedrich, & Greenberg, 1983; Crnic & Low, 2002), several additional stressors may also contribute to the amount of experienced psychological tension, such as difficult relationships with the school personnel and other professionals (Blacher & Hatton, 2007) or child's frequent behaviour problems (Baker et al., 2003). Mothers are especially encumbered with responsibilities and possible negative social and psychological consequences of caring for a disabled child. As Shearn and Todd (2000) argued, these mothers often suffer from low self-esteem, social limitations, and occupational disadvantages. Furthermore, maternal parenting stress tends to increase with time and factors, such as parental well-being, marital quality and father-child relationship quality, play a significant role in regulating the amount of experienced emotional tension (Gerstein, Crnic, Blacher, & Baker, 2009). Although the literature provides extent evidence on stress and resilience factors among parents of children with ID, little is known about parents of children with BIF. It seems possible that those caretakers experience similar disadvantages, obstacles, and frustrations. Children with borderline intelligence do not formally meet the criteria for intellectual disability, however, similarly like children with ID, they frequently experience substantial problems and restrictions affecting their educational opportunities, psychological health, social adaptation, and eventually their independence in adulthood. Therefore, research on stress, adaptation, and resilience among mothers and fathers rearing children with borderline intelligence is a matter of great importance. Future studies should meticulously investigate factors moderating and mediating the amount of experienced stress, as well as risk and protective factors determining their resilience. New research should also focus on determining the most effective forms of promoting resilience among those parents. Empowering parents is beneficial for the wellness of both, the parent and the child (Bekhet et al., 2012). If parents are resilient and maintain psychological balance, they provide more appropriate care that directly translates into a child's positive adaptation and augment the child's chances to reach developmental milestones (Peer & Hillman, 2014).

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